REMARKS

This application has been reconsidered carefully in light of the Office Action dated as mailed on 24 April 2003. A careful reconsideration of the application by the Examiner in light of the foregoing amendments and the following remarks is respectfully requested.

This response is timely filed as it is filed within the three (3) month shortened statutory period for response to the outstanding Office Action.

There is no additional claim fee due for this Amendment because the number of claims does not exceed the number of independent and dependent claims for which fees have previously been paid.

Amendment to the Claims

By the above,

1. withdrawn claims 25 and 26 have been canceled without prejudice, and

2. claims 27 and 28 have been added to more fully and completely claim the disclosed subject matter.

Newly added claims 27 and 28 generally parallel originally filed claims 14 and 15 but made dependent on claim 16 rather than claim 12. In this regards it is noted that claim 28, directed to a micro-gas generator, is directed to the previously elected species and that claim 27, directed to a seat belt pretensioner, is directed to a previously non-elected species.

Election/Restrictions

The withdrawal from further consideration of claims 14, 25 and 26 as being drawn to non-elected species and group is acknowledged.

Claims 1-24, 27 and 28 remain in the application, with claims 1-13, 15-24 and 28 being drawn to the previously elected species and group.

Claim Rejections - 35 U.S.C. §103

Claims 1-13 and 15-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,132,480 to Barnes et al. (hereinafter "Barnes") in view of U.S. Patent 6,136,114 to Johnson et al. (hereinafter "Johnson").

In so rejecting these claims, the Action asserts that Barnes discloses an igniter composition used in inflatable devices such as vehicle occupant restraint

devices which are in a housing and act to ignite a gas generant composition which inflates the airbag. The Action further asserts that the igniter composition of Barnes comprises 10-25 % boron, 55-80 % of an oxidizer such as KNO_3 and 10-25 % of an organic gas producing fuel such as guanidine nitrate. The Action still further asserts that Johnson teaches a micro gas generator that contains an igniter composition and that it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the igniter composition of Barnes in a micro-gas generator because Barnes suggests that it can be used to ignite a gas generant and also because Johnson teaches the use of igniter compositions with a micro-gas generator.

Such rejections are respectfully traversed.

As a preliminary matter, it is noted that each of claims 9, 10, 16 and 24 requires that the igniter composition contains less than 10 composition weight percent boron.

In contrast, as stated in the Action, the igniter composition of Barnes comprises 10-25 % boron. The Action has failed to identify or provide any basis for an igniter composition in accordance with Barnes and which ignited composition contains less than 10 composition weight percent boron, as required by each of claims 9, 10, 16 and 24.

In view thereof, at least claims 9, 10, 16 and 24 are believed to be clearly patentable over the prior art of record and notification to that effect is solicited.

It is further noted that independent claims 1 and 11 each requires that the fuel component and the oxidizer component are each present in the igniter composition in stoichiometrically balanced amounts. The specification specifically provides that:

> References to "stoichiometrically balanced amounts" of fuel and oxidizer components in a composition are to be generally understood to refer to those compositions which include or contain components in sufficient relative amounts such as to minimize or avoid the production of significant amounts of incomplete products of combustion such as CO and NO, for example. More particularly, as used herein, a fuel component and the oxidizer component are considered present in stoichiometrically balanced amounts if the composition contains no more than about ± 4 weight percent of the amount of fuel (other than boron) and oxidizer required for complete burning to CO_2, H_2O and N_2. (See page 11, line 14 through page 12, line 2, for example.)

As detailed in the application specification, there is a need and a demand for improvements in igniter compositions and related methods of gas generation such as desired or suitable for use in occupant restraint system devices such as micro-gas generators such as in the form of a seat belt pretensioner. In particular, a desirable feature of micro-gas generator devices used in or in connection with seat belt pretensioners is the minimization or avoidance of the production of substantial amounts of possibly undesirable effluent gases such as carbon monoxide

and nitric oxide, for example, and which undesirable effluent gases might somehow escape into the vehicle interior and thus come into contact with the occupant(s). In this regard, there has been a particular need and demand for such igniter compositions, related methods of gas generation and corresponding occupant restraint system devices which are preferably effective in minimizing or reducing ignition delays, e.g., ignite a gas generant composition within an occupant restraint system device within about 1 millisecond, preferably within about 0.25 milliseconds or less and, even more preferably, at least in certain applications, within a delay time on the order of about 0.1 milliseconds, while also minimizing or avoiding the production of various undesirable effluent gases such as nitrous oxide (N_2O), nitric oxide (NO), ammonia (NH_3) and carbon monoxide (CO), for example. (See application, page 8, line 5 through page 9, line 6, for example.)

The significance of the igniter fuel component and the igniter oxidizer component being present in stoichiometrically balanced amounts, as in the claimed invention, is detailed in the application. (See application, page 19, lines 1-6, for example.)

It is respectfully submitted that neither:

1. an igniter composition comprising a fuel component containing at least about 3 composition weight percent and less than 15 composition weight percent of

boron, and an oxidizer component containing at least one oxidizer material selected from the group consisting of alkali metal nitrates, alkaline earth metal nitrates and mixtures thereof, wherein the fuel component and the oxidizer component are present in stoichiometrically balanced amounts, as claimed in independent claim 1, nor

2. an occupant restraint system device comprising a housing containing a supply of reactant material, the reactant material including a fuel component containing at least about 3 composition weight percent and less than 15 composition weight percent of boron, and an oxidizer component containing at least one oxidizer material selected from the group consisting of alkali metal nitrates, alkaline earth metal nitrates and mixtures thereof, wherein the fuel component and the oxidizer component are present in stoichiometrically balanced amounts, as claimed in independent claim 11,

are shown or suggested by the prior art. In particular, the provision of an igniter composition, as claimed, and wherein the fuel component and the oxidizer component are present in stoichiometrically balanced amounts are not shown or suggested by the prior art and are only obtained through the teachings of the subject patent application.

In view thereof, claims 1-13 and 15-24 are believed to be patentable over the prior art of record and notification to that effect is requested.

Newly Added Claims

By the above, claim 28 (to a micro-gas generator comprising the occupant restraint system device of claim 16) has been added.

As claim 16 is believed to be patentable over the prior art of record for the reasons discussed above, claim 28 which depends on claim 16 is believed to be further patentable over the prior art of record and notification to that effect is solicited.

[Newly added claim 27 (directed to a seat belt pretensioner comprising the occupant restraint system device of claim 16) is discussed below in conjunction with "withdrawn claims."]

Withdrawn Claims

In view of the above, consideration of previously withdrawn claim 14 and newly added claim 27 is requested.

As previously withdrawn claim 14 depends on claim 12 and, as described above, claim 12 is believed to be patentable over the prior art of record, claim 14 is also believed to be patentable over the prior art of record and notification to that effect is solicited.

By the above, claim 27 (directed to a seat belt pretensioner comprising the occupant restraint system device of claim 16) has been added. As claim 16 is

believed to be patentable over the prior art of record, claim 27 is also believed to be patentable over the prior art of record and notification to that effect is solicited.

Conclusion

It is believed that the above Amendment places all pending claims in condition for allowance and notification to that effect is solicited. However, should the Examiner detect any remaining issue or have any question, the Examiner is kindly requested to contact the undersigned, preferably by telephone, in an effort to expedite examination of the application.

Respectfully submitted,

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